WHAT IS CLAIMED IS:

1. An air conditioner comprising:

a plurality of compressors for compressing a refrigerant;

a condenser for condensing the refrigerant;

an electronic expansion valve for expanding the refrigerant;

an evaporator for evaporating the refrigerant;

a direction change valve for changing the flow direction of the refrigerant;

a refrigerant pipe for connecting the compressors, the condenser, the electronic expansion valve, the evaporator and the direction change valve; and

a microcomputer for controlling the operation of the air conditioner,

wherein the microcomputer controls an opening degree of the electronic expansion valve so that a current degree of superheat coincides with a target degree of superheat set according to the refrigerant compression capacity of operating compressor(s) and an outdoor temperature in case that one or more compressors are operated so that the refrigerant compression capacity is variably changed in accordance with a cooling or heating load.

2. The air conditioner as set forth in claim 1, further comprising:

a first temperature sensor, installed at inlets of the compressors, for measuring the temperature of the refrigerant sucked into the compressors;

a second temperature sensor, installed at the evaporator, for measuring the temperature of the refrigerant passing through the evaporator; and

a third temperature sensor, installed outdoors, for measuring the outdoor temperature,

wherein the microcomputer sets a difference between the temperature of the refrigerant at the inlets of the compressors measured by the first temperature sensor and the temperature of the refrigerant at the evaporator measured by the second temperature sensor as the current degree of superheat, and sets the target degree of superheat according to the refrigerant compression capacity of the operating compressor(s) and the outdoor temperature measured by the third temperature sensor.

3. The air conditioner as set forth in claim 2,

wherein the plural compressors includes first and second compressors having different refrigerant compression capacities.

4. The air conditioner as set forth in claim 3,

wherein the refrigerant compression capacity of the first compressor is larger than that of the second compressor.

5. The air conditioner as set forth in claim 4,

wherein both of the first and second compressors are simultaneously operated, or only one of the first and second compressors is selectively operated, according to the cooling or heating load.

6. The air conditioner as set forth in claim 5,

wherein the microcomputer includes tables storing the target degrees of superheat in accordance with the variation in the refrigerant compression capacity of the operating compressor(s) and the outdoor temperature.

7. A method for controlling an electronic expansion valve of an air conditioner comprising the steps of:

(a) operating one or more of a plurality of compressors so that the refrigerant compression capacity of the operating compressor(s) is variably changed according to a cooling/heating load;

(b) calculating a current degree of superheat and simultaneously setting a target degree of superheat in accordance with the refrigerant compression capacity of the operating compressor(s) and an outdoor temperature in case

that one or more of the plural compressors are operated at the step (a); and

(c) controlling an opening degree of the electronic expansion valve so that the current degree of superheat calculated at the step (b) coincides with the target degree of superheat.

8. The method as set forth in claim 7,

wherein the step (a) includes the step of determining whether a first compressor having a refrigerant compression capacity of X% of the total refrigerant compression capacity and a second compressor having a refrigerant compression capacity of (100-X)% of the total refrigerant compression capacity are simultaneously or selectively operated.

9. The method as set forth in claim 8,

wherein the step (a) further includes the step of operating the first and second compressors simultaneously according to the cooling or heating load, or the step of operating only one of the first and second compressors selectively, according to the cooling or heating load.

10. The method as set forth in claim 7,

wherein the current degree of superheat at the step (b) is calculated from a difference between a temperature of the

refrigerant at inlets of the operating compressor(s) and a temperature of the refrigerant at an evaporator.

11. The method as set forth in claim 7,

wherein the target degree of superheat set at the step (b) in case that first and second compressors are simultaneously operated in a cooling or heating mode at the step (a) is set to be larger than the target degree of superheat set at the step (b) in case that one of the first and second compressors is selectively operated in the cooling or heating mode at the step (a).

12. The method as set forth in claim 11,

wherein the target degree of superheat set at the step (b) in case that the outdoor temperature is not more than a first designated temperature in a cooling mode at the step (a) is set to be smaller than the target degree of superheat set at the step (b) in case that the outdoor temperature is more than the first designated temperature in the cooling mode at the step (a).

13. The method as set forth in claim 12,

wherein the target degree of superheat at the step (b) is set to -2℃ in case that the first and second compressors are simultaneously operated in the cooling mode and the outdoor

temperature is not more than 40℃ at the step (a), and set to -3℃ in case that the first and second compressors are simultaneously operated in the cooling mode and the outdoor temperature is more than 40℃ at the step (a).

14. The method as set forth in claim 13,

wherein the target degree of superheat at the step (b) is set to 0℃ in case that only one of the first and second compressors is selectively operated in the cooling mode and the outdoor temperature is not more than 40℃ at the step (a), and set to -1℃ in case that only one of the first and second compressors is selectively operated in the cooling mode and the outdoor temperature is more than 40℃ at the step (a).

15. The method as set forth in claim 11,

wherein the target degree of superheat set at the step (b) in case that the outdoor temperature is not more than a second designated temperature in a heating mode at the step (a) is set to be smaller than the target degree of superheat set at the step (b) in case that the outdoor temperature is more than the second designated temperature in the heating mode at the step (a).

16. The method as set forth in claim 15,

wherein the step (b) further includes the step of

simultaneously operating both of the first and second compressors in case that the outdoor temperature in the heating mode at the step (a) is not more than a third designated temperature lower than the second designated temperature.

17. The method as set forth in claim 16,

wherein the target degree of superheat at the step (b) is set to -1℃ in case that the first and second compressors are simultaneously operated in the heating mode and the outdoor temperature is not more than -4℃ at the step (a), set to -2℃ in case that the first and second compressors are simultaneously operated in the heating mode and the outdoor temperature is more than -4℃ and not more than 20℃ at the step (a), and set to -3℃ in case that the first and second compressors are simultaneously operated in the heating mode and the outdoor temperature is more than 20℃ at the step (a).

18. The method as set forth in claim 17,

wherein the target degree of superheat at the step (b) is set to 0℃ in case that only one of the first and second compressors is selectively operated in the heating mode and the outdoor temperature is not more than 20℃ at the step (a), and set to -1℃ in case that only one of the first and second compressors is selectively operated in the heating mode and the outdoor temperature is more than 20℃ at the step (a).